ABSTRACT

Disclosed are compositions and methods for analyzing a target sequence in a sample. Generally, the method includes use of at least one pair of probes (Probe A and Probe B). In one embodiment, Probe A hybridizes to wanted and unwanted nucleic acid in the sample and bears a fluorophore andProbe B hybridizes to unwanted nucleic acid in the sample and bears a quencher. Fluorescence signal from Probe A hybridizing to unwanted nucleic acid is quenched by any relatively close hybridization of Probe B hereby increasing the specificity for the presence, amount or absence of the wanted target sequence. In preferred embodiments, the method is referred to as Fluorescence In-Situ Hybridization (FISH). The invention has many useful applications including rapidly detecting a microbial target sequence in a clinical sample.

Doc. 438047